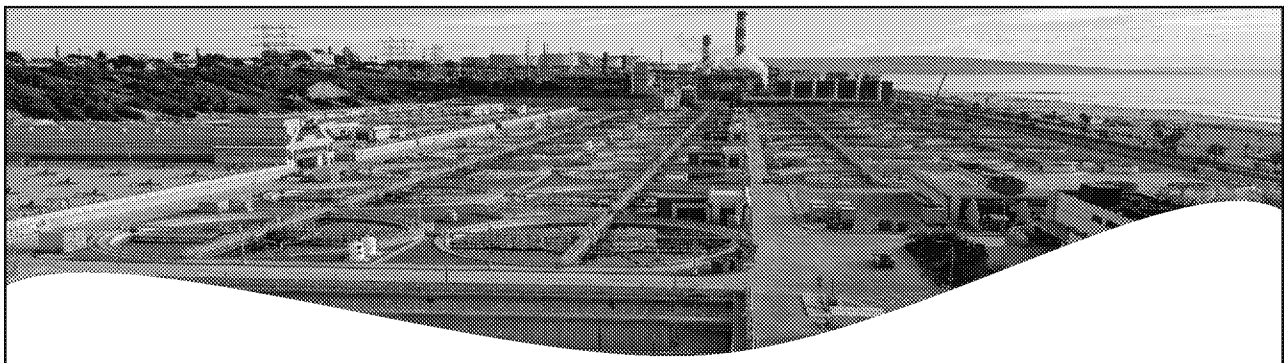


Hyperion 2035 Community Advisory Group Meeting

Meeting #3: CEQA 101 and Environmental Considerations

February 24, 2022

1

Announcements

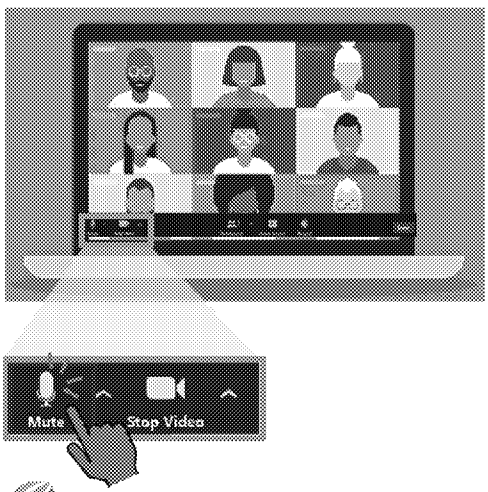
Leneyde Chavez

Engagement and Government Affairs

Carollo Engineers

2

Zoom Reminders



CAG Members please

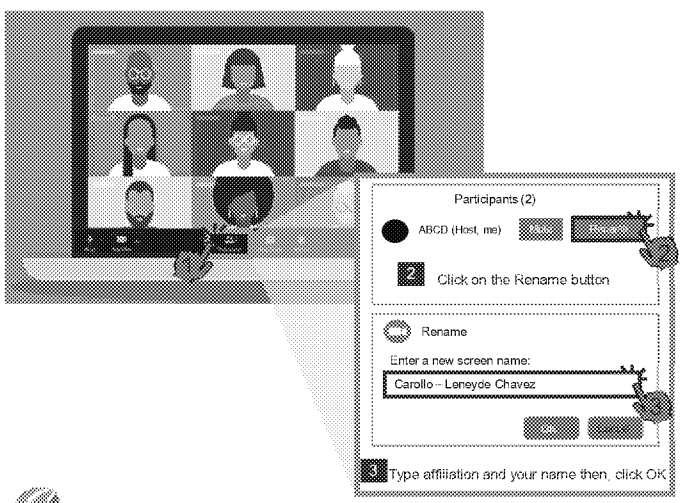
- Mute when not speaking
- Use your video for better participation during the meeting
- If experiencing a poor connection, turning off video may help
- Use hand raise button

General Reminders

- Chat is not enabled
- all other attendees are observers only

3

Zoom Reminders



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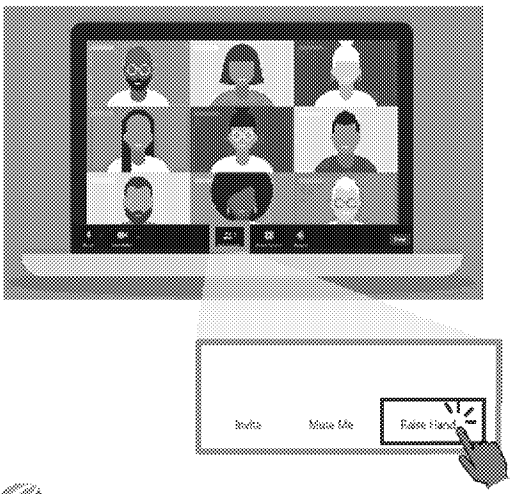
4

Zoom Reminders



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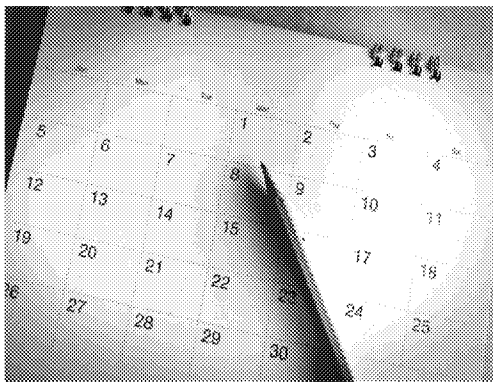
5

CAG Introductions

6

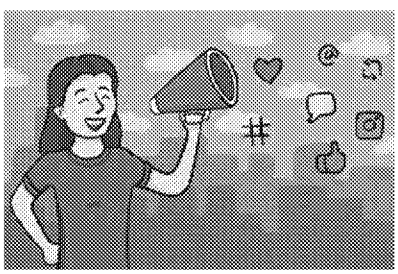
Upcoming Meetings

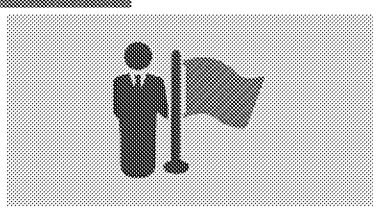
- Winter: CAG #3
- Spring: TAG #4
- Summer: CAG #4
- Fall: TAG #5



CAG members as Ambassadors

- CAG Participants
  - Environmental Justice
  - Labor
  - Business Groups
  - Civic Groups
  - Environmental nonprofits
- CAG members - project proponents
  - Hyperion 2035 Program
  - City wide benefits of recycled water






LA SANITATION
100% WATER RECYCLING
Welcome
Barbara Romero
Director and General Manager
LA Sanitation and Environment

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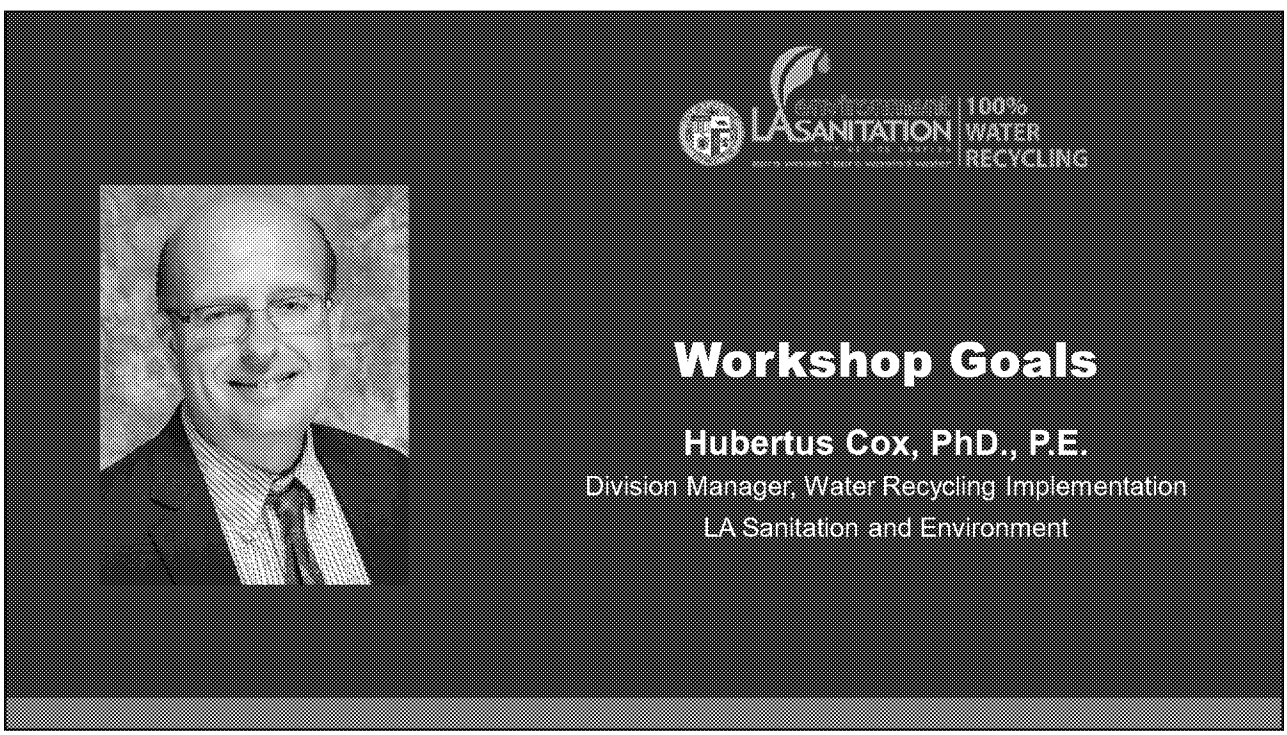
LA SANITATION
100% WATER RECYCLING
Workshop Goals
Hubertus Cox, PhD., P.E.
Division Manager, Water Recycling Implementation
LA Sanitation and Environment

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Agenda
• Announcements
• Welcome
• Workshop Goals
• CEQA 101
• Q&A
• TAG #3 Update
• Water-Energy Nexus
• Marine Water Quality
• Q&A
• PEIR Status Update
• Q&A
• Closing Remarks
• Adjourn

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LA SANITATION
100% WATER RECYCLING
California Environmental Quality Act (CEQA) 101
Paul S. Cobian
Environmental Supervisor, Regulatory Affairs
LA Sanitation and Environment

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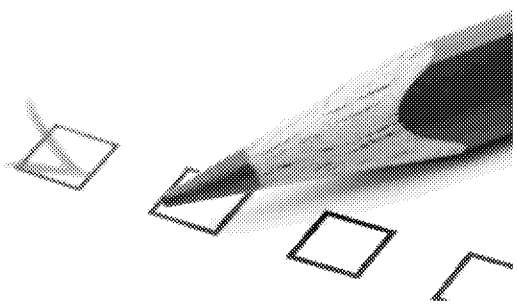
What is CEQA?

CEQA requires public agencies to "look before they leap" and consider the environmental consequences of their discretionary actions. CEQA is intended to inform government decisionmakers and the public about the potential environmental effects of proposed activities and to prevent significant, avoidable environmental damage.

CEQA Evaluates Change

- **Change from existing condition**
- **Short- and long-term impacts**
- **Direct and indirect changes**
- **Cumulative changes (includes other projects)**
- **Local and regional plans**



CEQA Objectives

DISCLOSE TO THE PUBLIC THE POTENTIALLY SIGNIFICANT ENVIRONMENTAL EFFECTS OF A PROPOSED PROJECT;

DEVELOP ALTERNATIVES AND MITIGATION MEASURES TO PREVENT OR MINIMIZE ENVIRONMENTAL IMPACTS;

FOSTER INTERAGENCY COORDINATION IN REVIEW OF PROJECTS;

IDENTIFY ADDITIONAL OPPORTUNITIES FOR PUBLIC PARTICIPATION AND COMMUNITY INPUT;

DISCLOSE THE REASONS FOR AGENCY APPROVAL OF PROJECTS WITH SIGNIFICANT ENVIRONMENTAL EFFECTS.

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Key Participants in the CEQA Process

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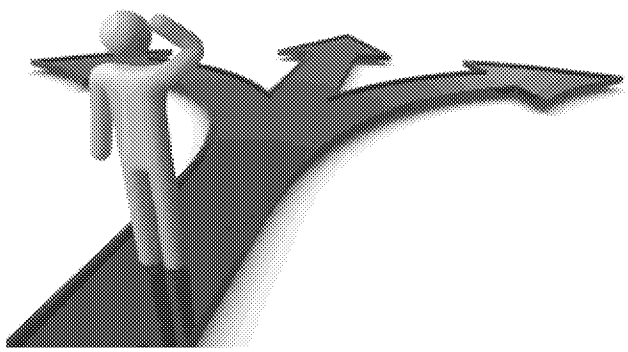
Determine the Level of Review

Three basic outcomes

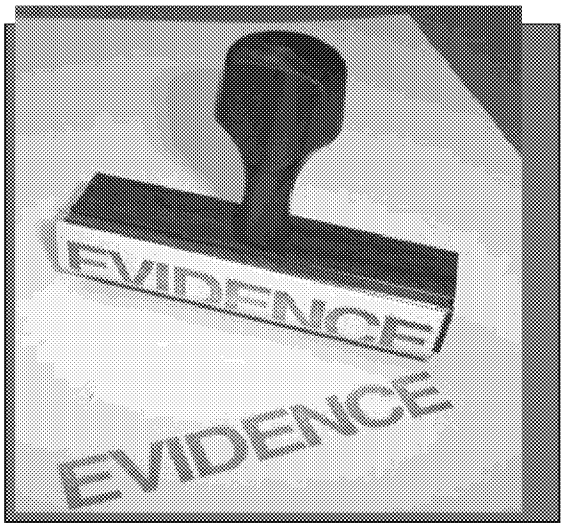
- Exempt
  - Statutory, Categorical, General
- Negative Declaration or Mitigated Negative Declaration
- Environmental Impact Report
  - Program
  - Project



When Must an EIR be Prepared?

When it can be fairly argued, based on substantial evidence, in light of the whole record, that a project may have a significant environmental effect. -*CEQA Guidelines § 15064*

- This is purposely a low threshold for EIRs
- Impacts = direct, indirect, and cumulative contribution impacts
- "May have" means that the evidence need not be absolute or unequivocal

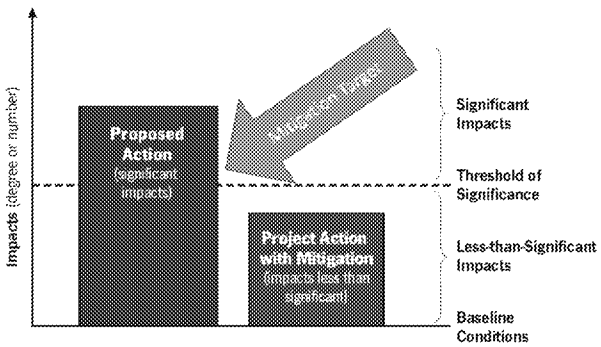


What is Substantial Evidence?

- What it is:
  - Facts
  - Reasonable assumption predicated on facts
  - Expert opinion supported by facts
- What it isn't:
  - Argument
  - Speculation
  - Unsubstantiated opinion or narrative
  - Clearly inaccurate or erroneous information
  - Socioeconomic impact not linked to physical environmental impact

Environmental Issues Covered in the PEIR

Threshold of Significance



- **A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect**
  - Noncompliance with which means the effect will normally be determined to be significant by the agency
  - Compliance with which means the effect normally will be determined to be less than significant.

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Mitigation Measures

Avoid	Avoid the impact altogether by not taking certain action or parts of an action
Minimize	Minimize impacts by limiting the degree or magnitude of the action and its implementation
Rectify	Rectify the impact by repairing, rehabilitating, or restoring the affected environment
Reduce or Eliminate	Reduce or eliminate the impact over time through preservation and maintenance during the life of the action
Compensate	Compensate for the impact by replacing or providing substitute resources or environment

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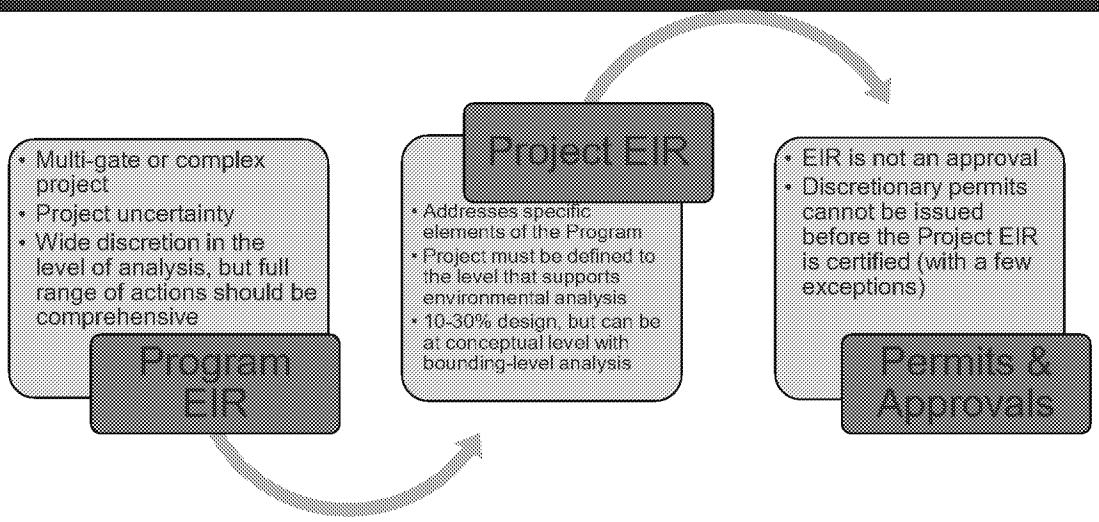
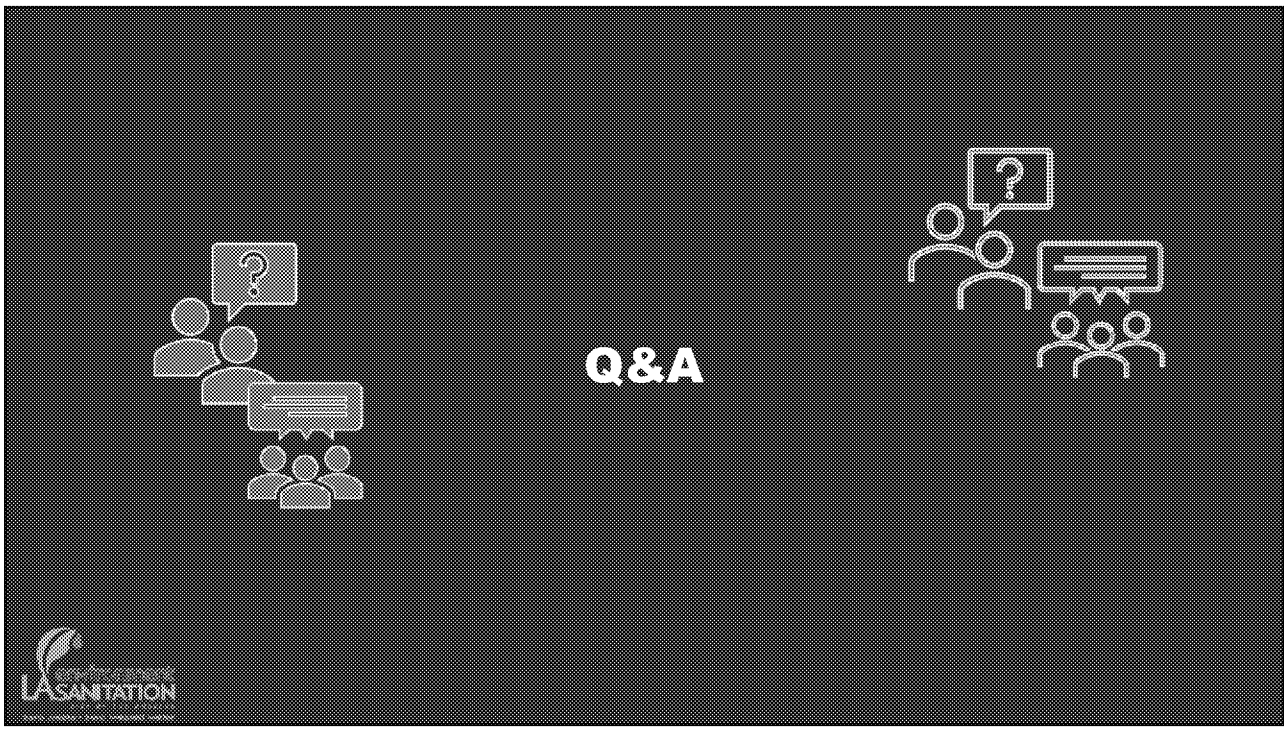
Environmental Review



Joint Program EIR

Hyperion 2035 (LASAN)	Operation NEXT (LADWP)
Substantial modifications to HWRP and outfall systems	New, large (96") conveyance lines, infrastructure, infiltration and reuse
Diverse stakeholders, Ocean and SMB	Diverse stakeholders, conveyance lines


Q&A
LA SANITATION

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LA SANITATION
100% WATER RECYCLING
TAG #3 Update
Christina Becerra Jones, P.E.
Environmental Engineer, Water Recycling Implementation
LA Sanitation and Environment

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TAG#3 Agenda

HWRP Today

- Operations
- Flows
- Discharges
- Permit compliance

Hyperion 2035

- Projected operations, flows, and discharges
- Screening Analysis
- RO Concentrate Management Options
  - Dilution Credits
  - Reduce ROC Quantity
  - Improve ROC Quality
  - Blend ROC

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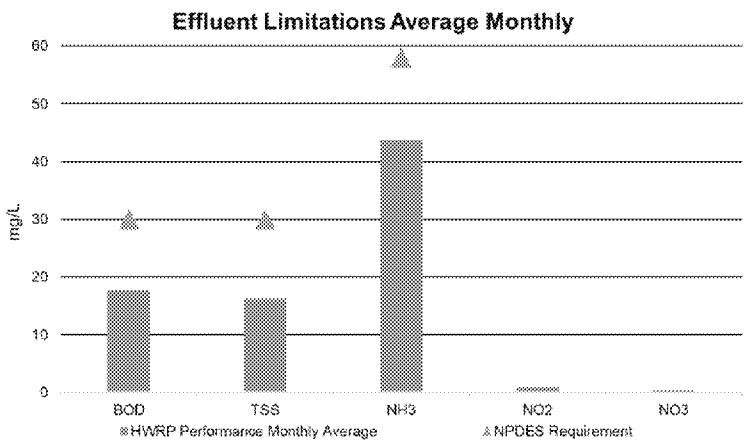
HWRP NPDES Requirements

- HWRP's current permit focuses on: TSS, BOD, and Ammonia
- HWRP's current ocean discharge is 225 MGD
  - With an additional 35MGD going to West Basin, where it is further treated for different end uses



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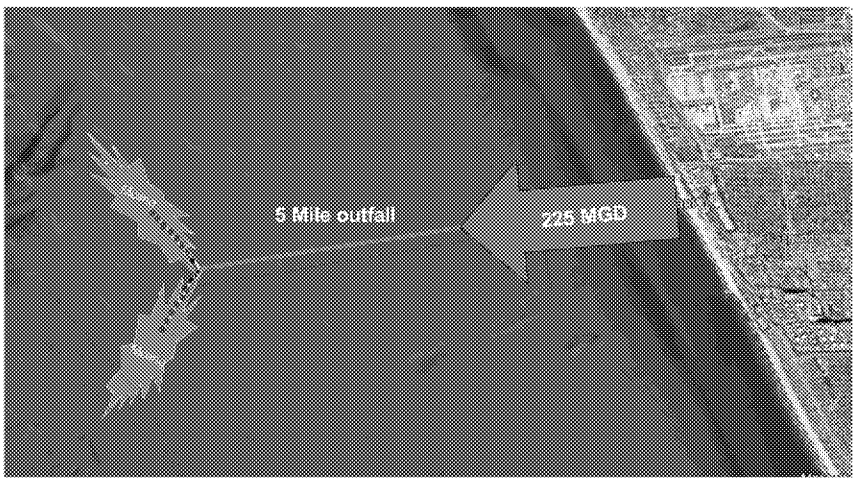
HWRP Current Outfall



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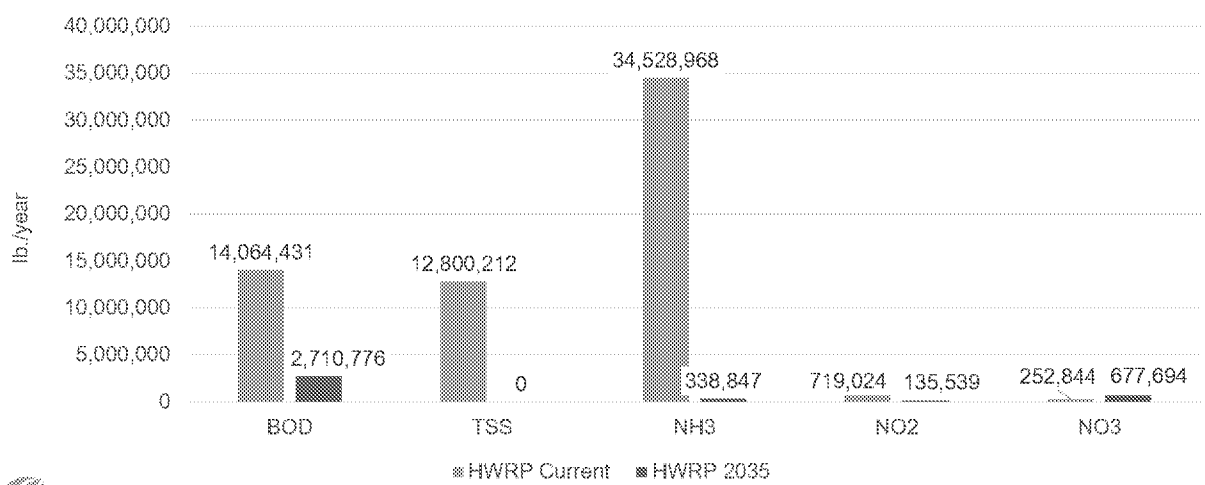
Future Solids, Organics and Nutrient Loads to the SMB Will be Significantly Reduced



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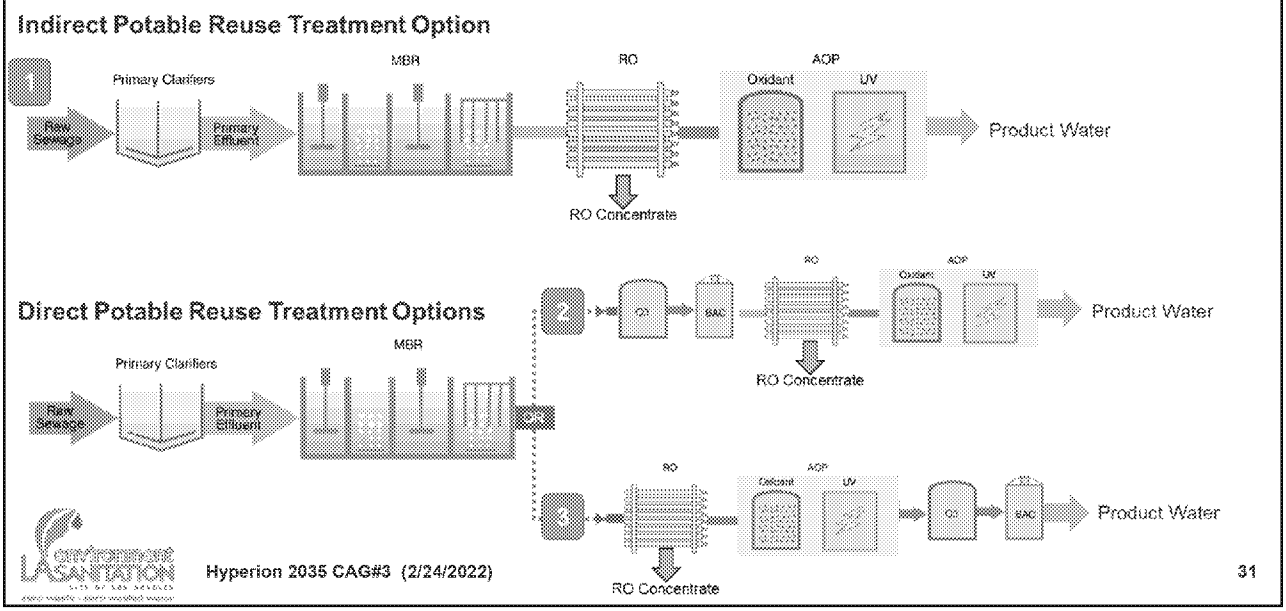
Advance Treatment Options



Hyperion 2035 CAG#3 (2/24/2022)

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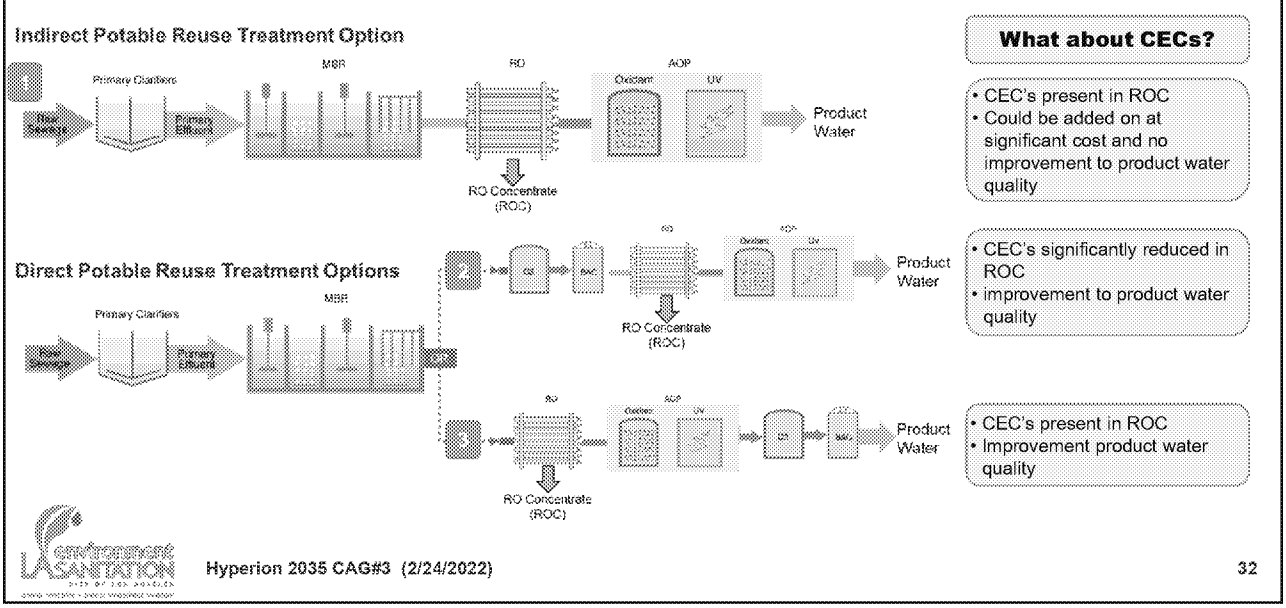
Advance Treatment Options



Hyperion 2035 CAG#3 (2/24/2022)

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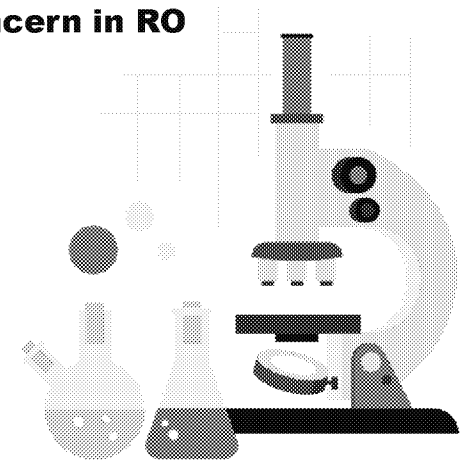
RO Concentrate

- **Out of 131 regulated constituents only 3 constituents have came back as having a potential concern in RO Concentrate**
  - Copper, PAHs, PCBs
- **Current Management Options**
  - Increase dilution credits
    - a permit-based option
  - Blend ROC
  - Treat ROC
  - Reduce ROC



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Recovery after RO:	80%	98%	100% *"Zero Discharge"*
Water produced (MGD)	217	266	272
Energy Usage (kWh/kgal)	1.5-2.5	2.5-15	100-250
Cost of Energy ($/Year)	24.8 Million	58.3 Million	115.3 Million
GHG Contribution ($MTCO_2e$/year)	3,300	7,860	15,619
Capital Improvement and O&M Costs	$$	$$$	$$$$
Challenge to control fouling	Average	Moderate	Significant

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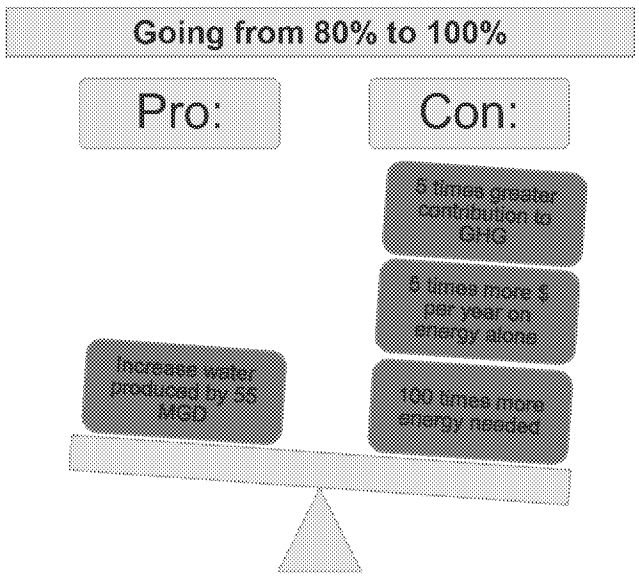

100% WATER RECYCLING

Water-Energy Nexus

Stephanie Gee, P.E.
Environmental Engineering Associate, Regulatory Affairs
LA Sanitation and Environment

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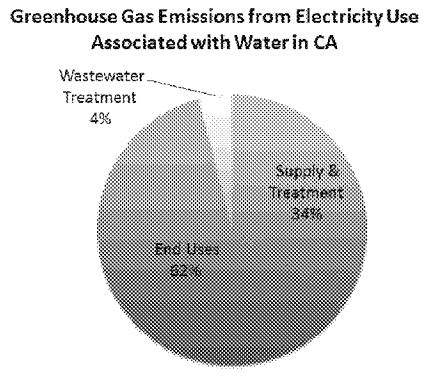
Water-Energy Nexus: Environmental Consideration in CEQA

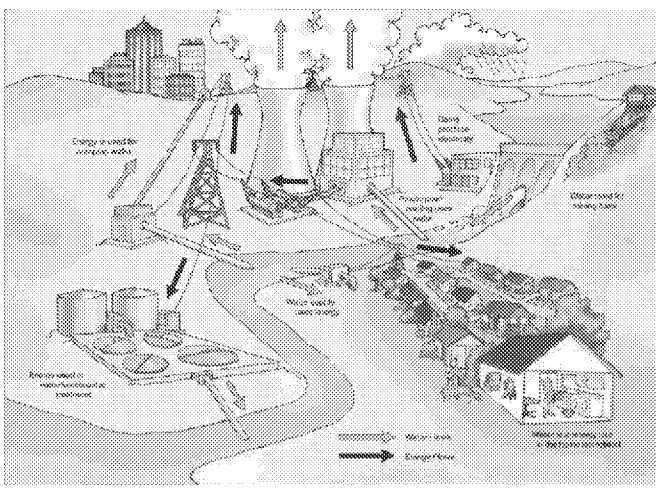
- Will project operations significantly increase energy demand?
- Are GHG emissions significant?
- If significant, can impacts be mitigated/reduced?



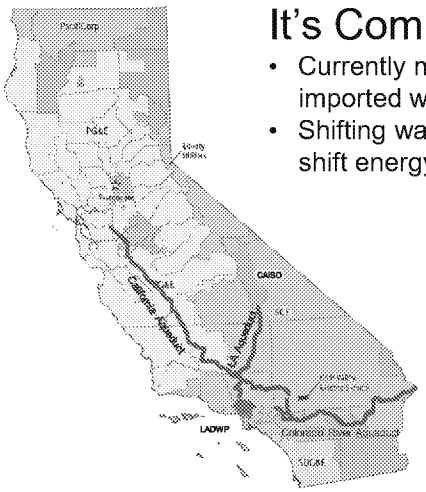
Source: California Energy Commission, *Refining Estimates of Water-Related Energy Use in California*

Water and Energy Always Linked

- Water and energy systems interdependent:
  - Energy embedded in all water resources (whether the energy is used for extraction, conveyance, treatment, and delivery or for recycling local water)
  - Energy production and electricity generation requires freshwater

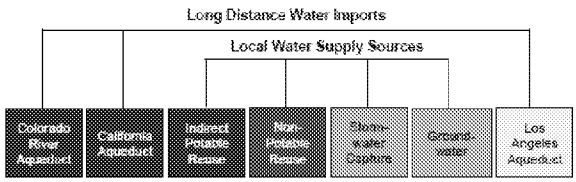


Energy Trade-Offs of Transitioning to Local Water Supply



It's Complicated!

- Currently multiple utilities deliver electricity for sourcing and/or treating each imported water source.
- Shifting water portfolio from long-distance water imports to local supplies will shift energy required for water supply from other utilities to LADWP grid.



Source: Zohrabian, A.; Sanders, K.T. The Energy Trade-Offs of Transitioning to a Locally Sourced Water Supply Portfolio in the City of Los Angeles. *Energies* 2020, *13*, 5589. https://doi.org/10.3390/en13215589.

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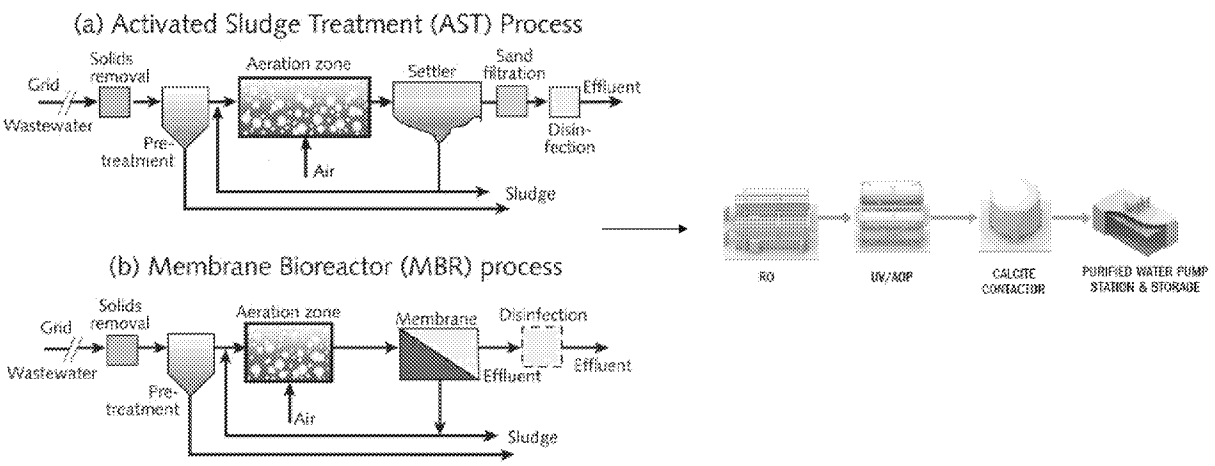
Water Recycling Technology



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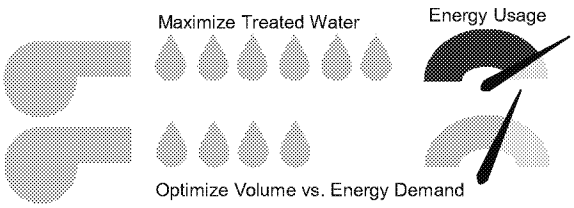
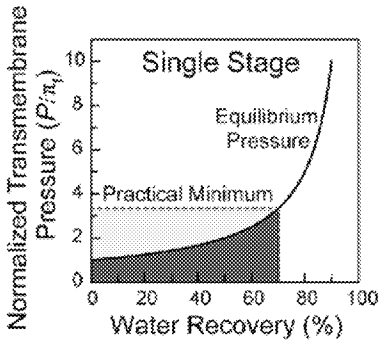
Energy vs Recovery Rate Trade-off

- For RO technology, water recovery rate is a trade-off with energy consumption.
- High recovery rates can come at steep energy costs.



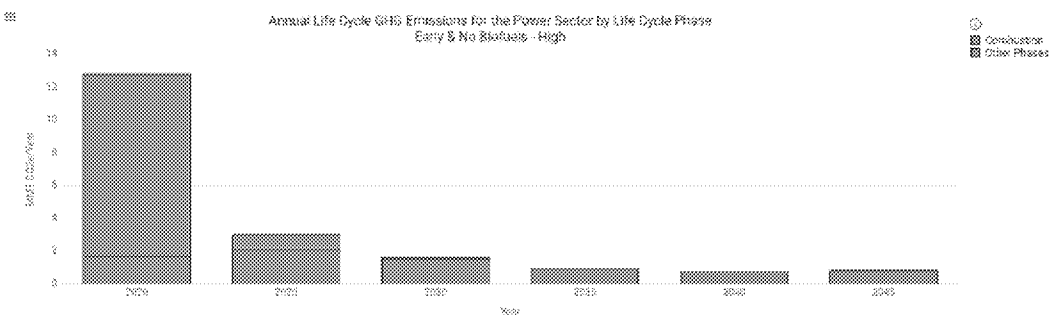


Source: Wang, L., Violet, C., DuChanois, R. M., & Elimelech, M. (2020). Derivation of the theoretical minimum energy of separation of desalination processes. *Journal of Chemical Education, 97*(12), 4361-4369.

GHG Emissions Associated with Water Supply and Energy Production is a Moving Target

Transitioning to Carbon-Free Energy Profiles

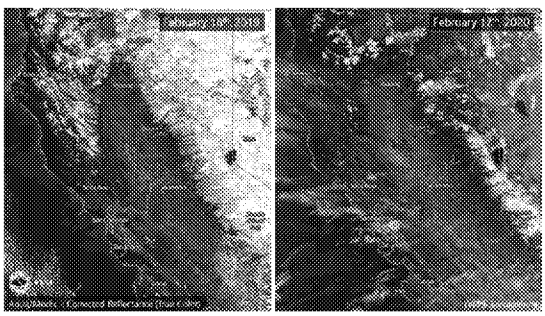
- SB 100 requires California transition to zero-carbon energy sources by 2045.
- Los Angeles commits to 100% carbon-free grid by 2035



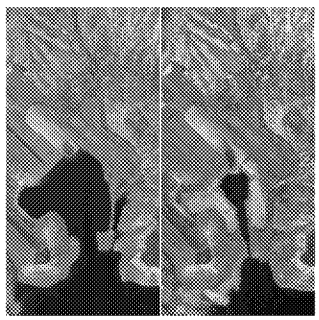
Source: LA100 Data Viewer

Resilient Water Sources

- LA imports water from sources that are variable and affected by drought/ climate change



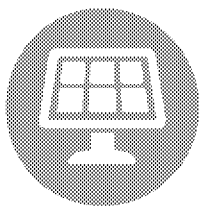
Sierra snowpack

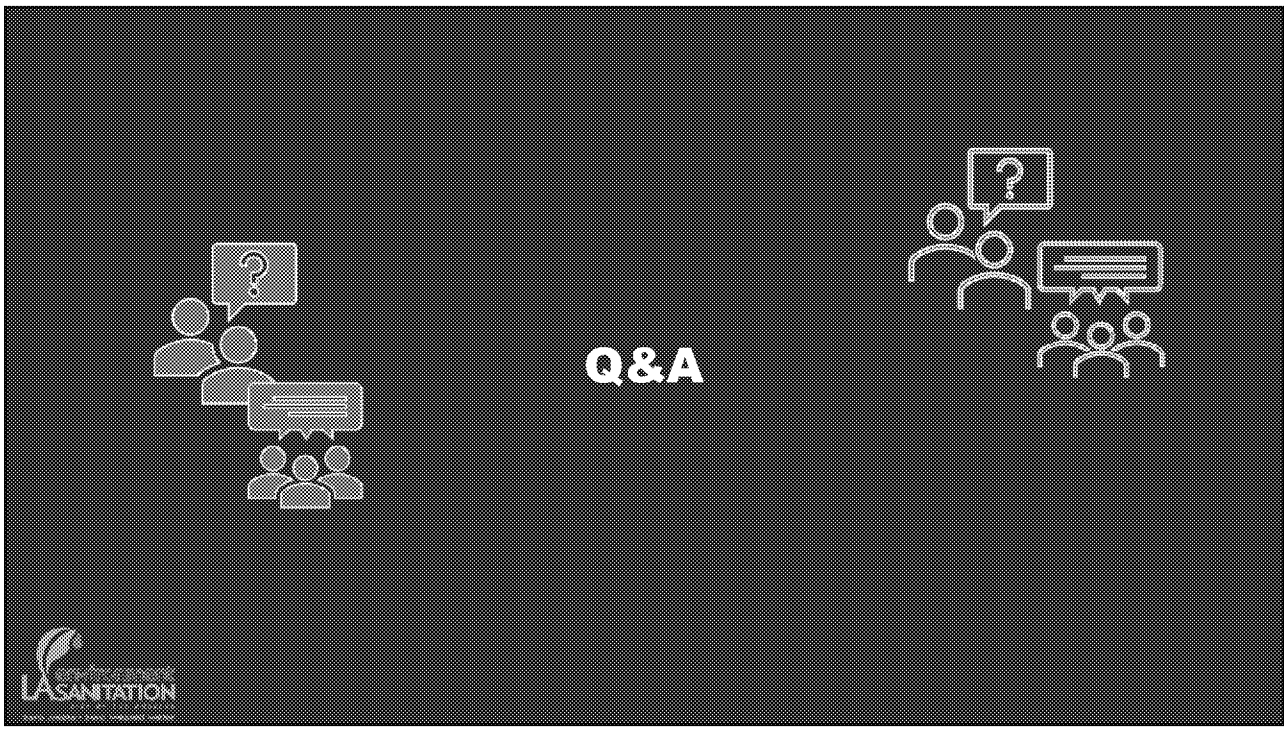


Lake Mead (Colorado River)

Hyperion 2035

- Water and energy systems are interdependent
- Energy trade-offs when transitioning to a local water supply
- High recovery rates can come at steep energy costs.
- A local water supply is a resilient water source




Q&A
LASANITATION

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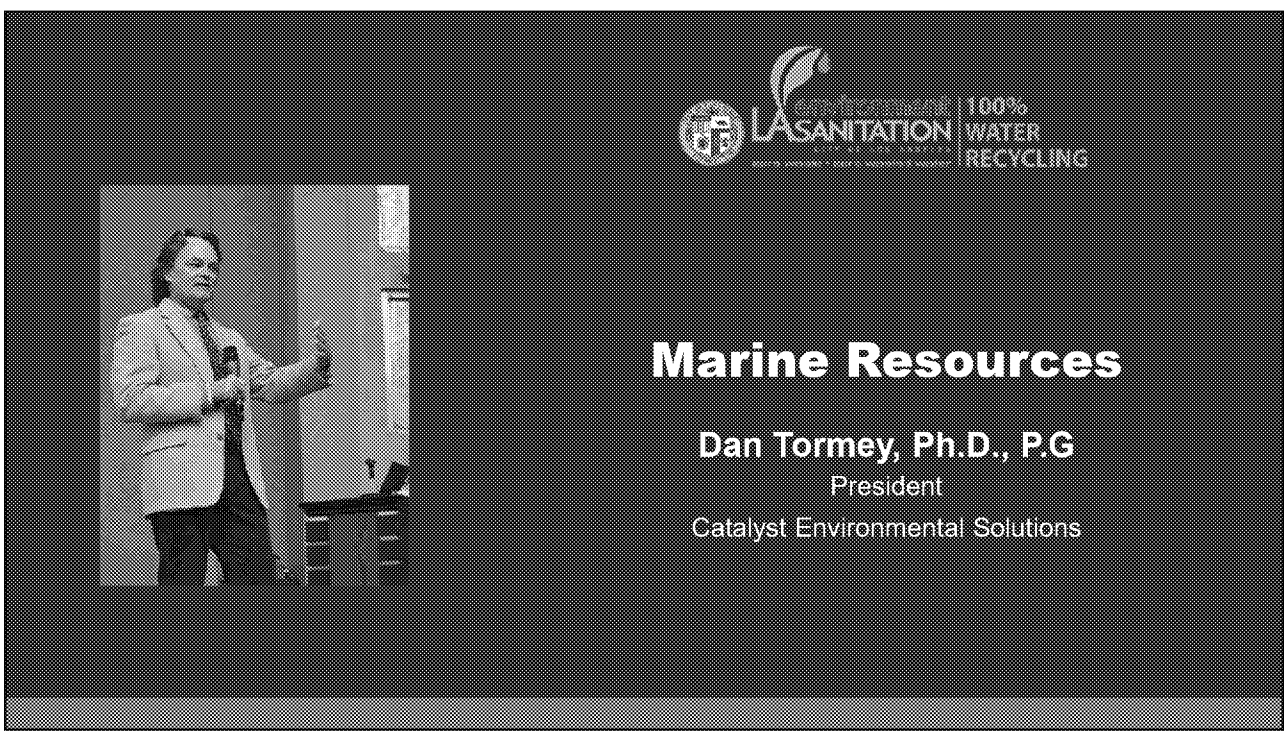
LASANITATION
100% WATER RECYCLING
Marine Resources
Dan Tormey, Ph.D., P.G
President
Catalyst Environmental Solutions

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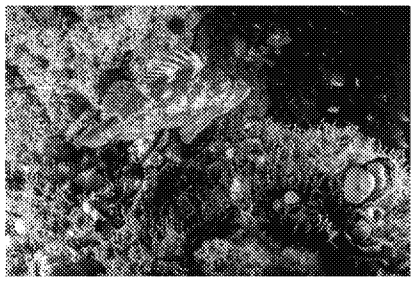
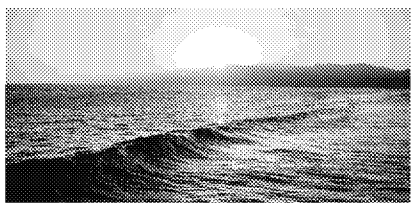
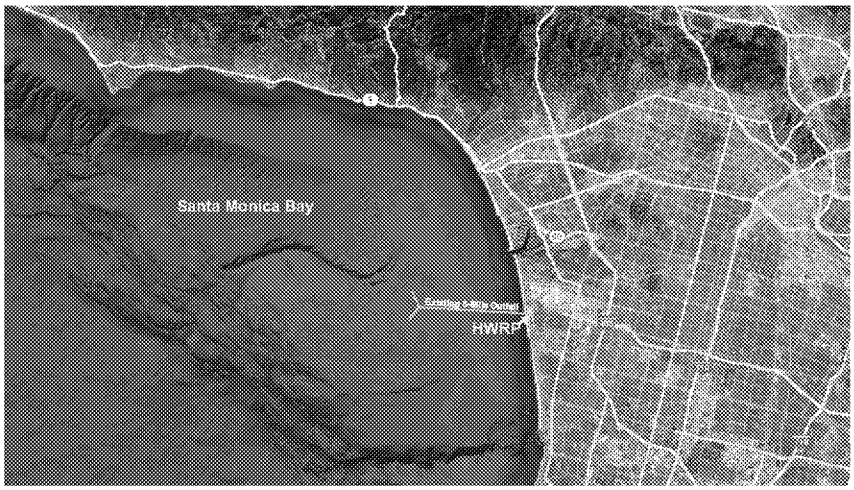
Impacts to Marine Resources







2035 Flow to HWRP and Discharges

Influent
272 MGD
(Ave. Dry Weather)

Up to 217 MGD of
Recycled Water for Reuse

AWT Concentrate

- 41–55 MGD of ROC will be discharged to the 5-mile outfall depending on RO recovery (80-85%)
- Minimum flow required: 49 MGD requires no modification to the outfall
- Dilution Credits & TMDLs

Analysis of Attainment of Effluent Limits

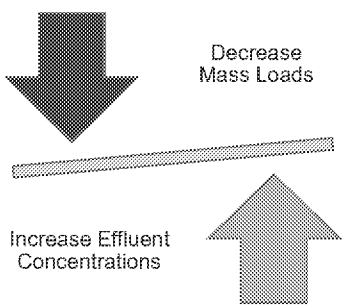
- **Conservative Analysis**
  - No issues, no need to look closer
  - Identified issues, look closer
  - Identified further steps
- **NPDES Permit Compliance is required, rather than CEQA "mitigation"**

Step 1
- **Screening Level Analysis (Reasonable Potential Analysis)**
  - Analyze 6 scenarios assuming all of the chemicals in the untreated wastewater are concentrated to 80 and 85 percent without any reduction prior to RO treatment.

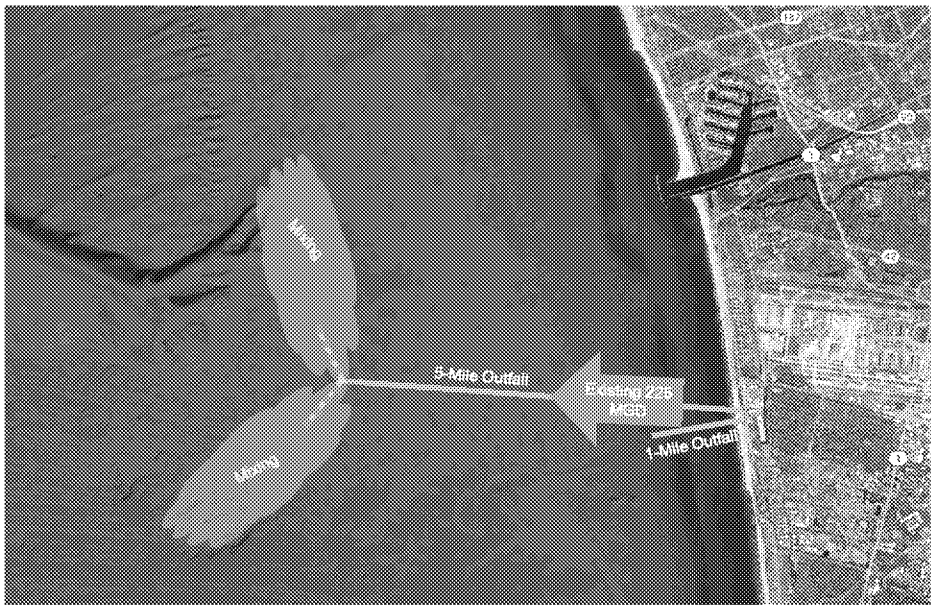
Step 2
- **Further Analysis of Potential Reduction in Concentration Prior to RO treatment**
  - Copper
  - Polyaromatic Hydrocarbons (PAHs)
  - Polychlorinated Biphenyls (PCBs)

Step 3
- **Identify Methods to Achieve Effluent Limitations**
  - Pilot test to determine actual concentrations
  - Treatment/In-Plant Reductions
  - Increase Dilution Credits (Mixing Zone)
  - Blend RO Concentrate (Add-Back)

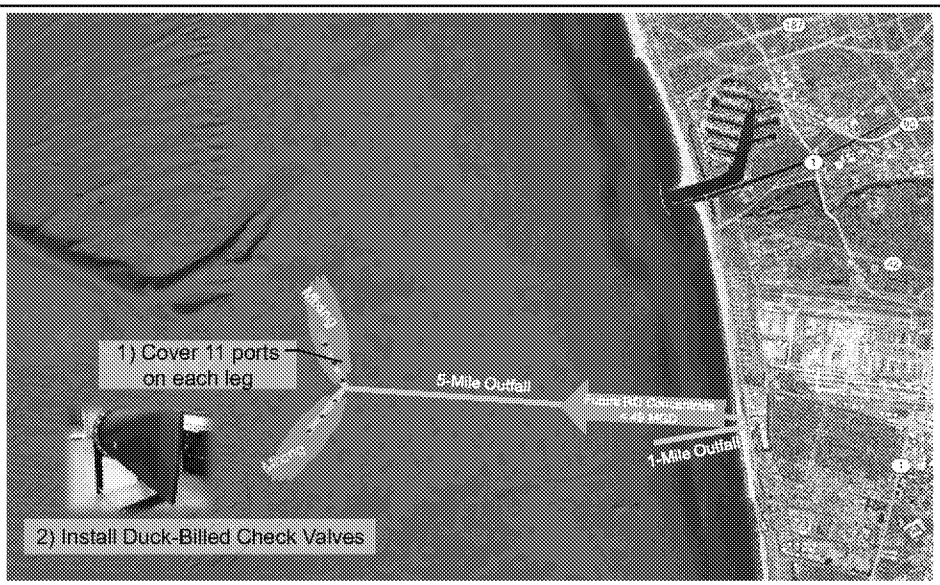
HWRP's Future Discharges - Summary



- Future discharges from HWRP will decrease therefore decreasing the solid and nutrients mass loads to SMB
- Minimum flow through the outfall needs to be maintained or modifications to the outfall is needed
- BOD, TSS and total nitrogen mass loads to the SMB will reduce significantly



Current: Flow to the Outfall Achieves Significant Mixing



Future: Less Mixing and Required Outfall Modifications for Flows <49 MGD

Impacts to Marine Resources

	Construction Impacts	Operation Impacts
Marine Biological Resources	short-term impacts during modification of outfall structure (less than significant, no mitigation required)	Reduction in volume and change in chemical composition of effluent discharges not found to have significant impacts on marine biological resources (less than significant, no mitigation required)

Marine Water Quality	• short-term, localized impacts due to resuspension of sediment, and risk of accidental spills.
	  • Compliance with USACE Section 10 permit and RWQCB Section 401 water quality certification for construction.
	  • Mitigation Measure requiring a Marine Oil Spill Response Plan will reduce impacts to less than significant.
		• Chemicals in effluent will be concentrated 80-85% = higher concentrations, but lower mass loads.
		• Decreased effluent volume = greater mixing.

- Program will require an approved NPDES permit which is the primary regulatory protection and tool for enforcement.
- The NPDES permit will include effluent limits that are protective of ocean water quality.
- **Compliance** with the NPDES Permit requirements = potential violations of water quality standards and/or waste discharge requirements would be minimized to a **less than significant level, with no additional mitigation required.**

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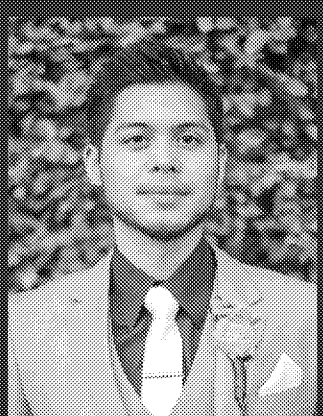

PEIR Update

Christopher Lopez
Environmental Specialist, Environmental Affairs
LA Department of Water and Power

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Operation Next and Hyperion 2035 Program Environmental Impact Report Status

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TENTATIVE CEQA SCHEDULE

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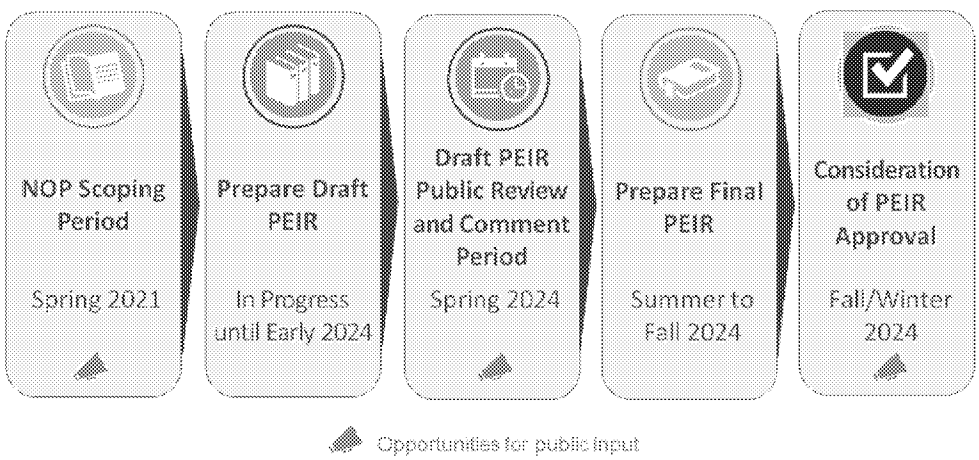

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For more information:

www.ladwp.com/operationnext/ceqa

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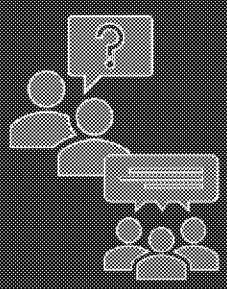
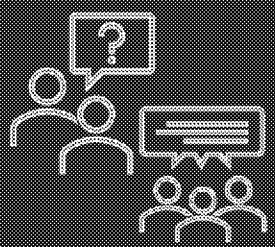
Q&A





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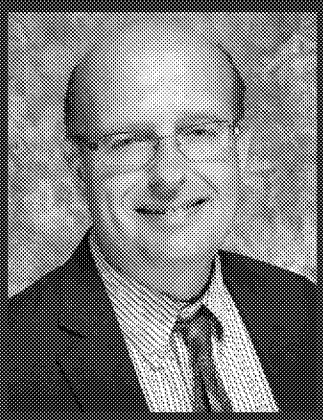

LA SANITATION | 100% WATER RECYCLING

Closing Remarks

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Division Manager, Water Recycling Implementation
LA Sanitation and Environment

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Thank you!

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